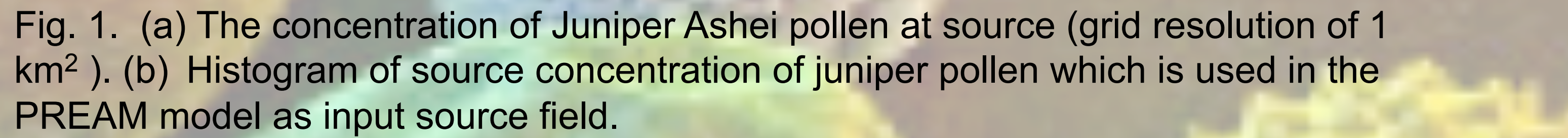


Methods:

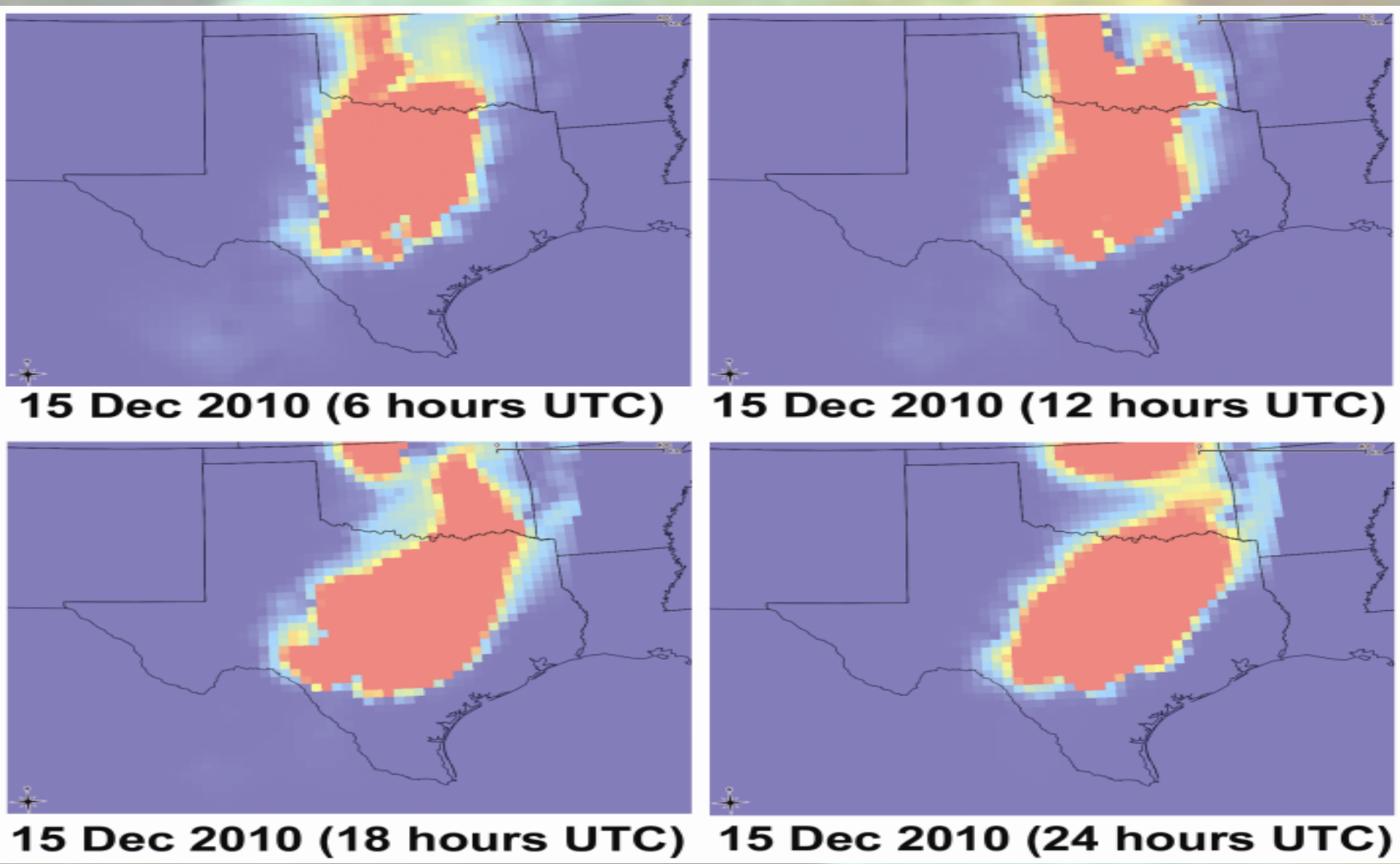
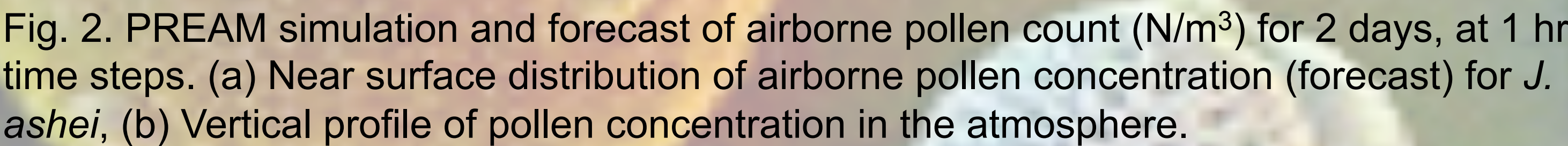
The Dust REgional Atmospheric Model (DREAM) is a verified model for atmospheric dust transport modeling using MODIS data products to identify source regions and quantities of dust. We successfully modified the DREAM model to incorporate pollen transport (PREAM) and used MODIS satellite images to develop *Juniperus ashei* pollen input source masks. The Pollen Release Potential Source Map, also referred to as a source mask in model applications, may use different satellite platforms and sensors and a variety of data sets other than the USGS GAP data we used to map *J. ashei* cover type. MODIS derived percent tree cover is obtained from MODIS Vegetation Continuous Fields (VCF) product (collection 3 and 4, MOD44B, 500 and 250 m grid resolution). We use updated 2010 values to calculate pollen concentration at source (*J. ashei*). The original MODIS derived values are converted from native ~250 m to 990 m (~ 1 km) for the calculation of a mask to fit the model (PREAM) resolution.

The diagram illustrates the integration of the Pollen REgional Atmospheric Model (PREAM) with other models. It features a central box labeled "Pollen REgional Atmospheric Model". To its left, a box labeled "POLLINATOR" has a blue arrow pointing towards the central box. To its right, a box labeled "CLIMATE" has a blue arrow pointing towards the central box. Above the central box, a box labeled "POLLINATOR" has a blue arrow pointing towards it. Below the central box, a box labeled "CLIMATE" has a blue arrow pointing towards it. The background is a blurred image of a flower.



J. C. Luwall^a, W. Sprigg^b, E. Levetin^c, A. Huete^d, S. Nickovic^b, A. Prasad^f, G. A. Pejanovic^b, A. Vukovic^f, P. Van de Water^g, A. Budge^h, W. Hudspeth^h, H. Krapflⁱ, B. Tothⁱ, A. Zelicoffi^j, O. Myers^h, L. Bunderson^c, G. Ponce-Campos^b, T. Crimmins^l, M. Menache^h, M. Vujadinovic^f

Public Health Alerts



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